Drawing Course by Jonathan Simon, MFA (instructor) and Chad Neuman, PhD (producer)

Drawing Materials Information

You can complete this course with only a pencil and paper, and a drawing area such as a desk or drawing board.

However, we are including information on more drawing materials, in case you are interested.

We've also included some helpful information on pencil ratings.

Some of the specific uses and applications of drawing materials are mentioned here, but they are demonstrated with more detail in the video lessons throughout the course.

Pencil Hardness Scales

Pencil Hardness Scale – Numerical Graphite:
If you grew up in the United States, you probably are familiar with needing a "number 2 pencil" for taking tests. This is part of the numerical scale for graphite pencils. For example, there are "2-1/2" and "3" pencils. The higher the number, the lighter the marks drawn on the paper, and the harder the core. In other words, the harder core leaves a lighter mark.

On the other hand, the pencils with a lower number have a softer core of graphite (by using less clay in the mixture). These pencils with a lower number leave a dark mark on the paper, because the graphite mixture is softer. These softer graphite pencils need to be sharpened more frequently than the higher number, harder pencils.

So, in summary:
Lower number = softer pencil core, which leaves a darker mark
Higher number = harder pencil core, which leaves a lighter mark

Pencil Hardness Scale – HB Scale:
The other graphite grading scale, the HB scale, is used by most pencil manufacturers outside of the United States. H stands for "hardness," since H indicates a hard pencil. B is used to indicate that the core is softer. It refers to the blackness of the tone the pencil produces, because it's a softer pencil.

Pencil manufacturers used to combine the letters, for example, HB to indicate a hard, black pencil mark, or BBB to indicate a very black pencil. But, currently, while HB is still used, many manufacturers use either H or B, and in combination with a number, typically.

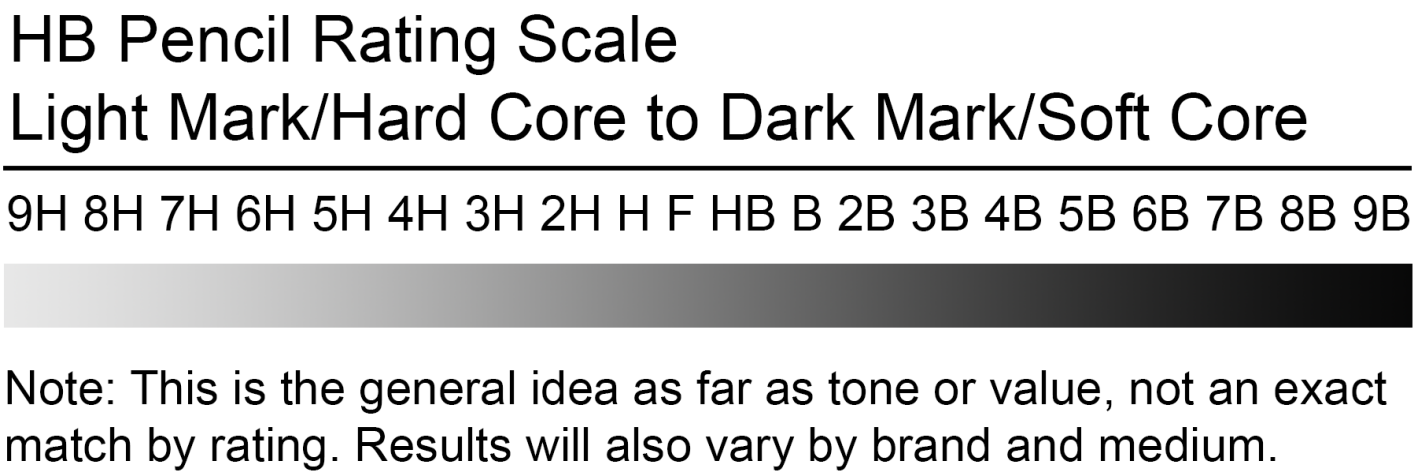
For example, going from lighter to darker: 9H, 8H, 7H, 6H, 5H, 4H, 3H, 2H, H, F, HB, 2B, 3B, 4B, 5B, 6B, 7B, 8B, 9B, and ebony, which is darker than 9B.

A 9H pencil has a very hard core and produces a very light mark. Honestly, I have never even seen a 9H pencil. As an artist who draws portraits, landscapes, still life subjects, and other types of drawings, I do not have a need for a 9H pencil. One context where a 9H would be used is drafting. It is the hardest standard grade for drafting, but many will use 4H to H or F as far as range. The problem with very hard pencils is that we can't make the mark dark at all, even if we put on more pressure. Eventually it risks damaging or ripping the paper, if we press too hard on it.

I typically start at H, although I might occasionally use a 2H. As far as softer, blacker pencils, I do not go past 6B. Therefore, my typical range is from H to 6B, from light to dark.

As we move from 9H down to 2H then H, we go from a harder to a softer core, and therefore go from a lighter to a darker mark. Then, HB is about in the middle, with a midrange softness and value. “F” is also around the midrange area, and it indicates that a pencil can be sharped to a fine point. Then we have B, 2B, 3B, 4B, etc., as the graphite mix becomes softer and therefore even more dark or black.

So, in summary, starting with light and going to dark:
Higher number H = harder pencil core, which leaves a lighter mark
Lower number H = softer pencil core, which leaves a darker mark (but not as dark as B range)
HB and F are in the midrange area.
Lower number B = harder pencil core, which leaves a lighter mark than higher number B pencils, but still darker than all the H pencils
Higher number B = softer pencil core, which leaves the darkest marks


HB Pencil Rating Scale
Light Mark/Hard Core to Dark Mark/Soft Core
9H 8H 7H 6H 5H 4H 3H 2H H F HB B 2B 3B 4B 5B 6B 7B 8B 9B
Note: This is the general idea as far as tone or value, not an exact match by rating. Results will also vary by brand and medium.

Numerical Scale vs. HB Scale and Graphite vs. Charcoal
There is not a consistent standard across the industry that matches the lightness and darkness of marks to specific ratings. In other words, a B2 pencil from one brand might not be as dark or light as a B2 pencil from another brand. The general concept is the same, in that H is lighter and B is darker, but results may vary by brand, and, of course, the medium being drawn upon (e.g., rough paper vs. smoother paper). A #2 pencil is around the midrange area of tone, and it is generally considered to be at the same area of value as an HB rating. But results will vary by brand. It is a good idea to experiment with pencils in these ranges and take notes about which brand you prefer. Many artists will use 2B because it has an excellent range of value and ability to blend, but sometimes people will use 3B or 4B for darker tones or an H pencil for lighter value.

Like graphite pencils, charcoal has H, HB, or B rating, or soft, medium, and hard, depending on the brand. For example, vine charcoal is available in B (Soft), HB (Medium), or H (Hard). There is also extra soft in vine charcoal, that is helpful adding toning, along with soft. Depending on the brand, charcoal pencils have ratings with numbers as well, such as HB, 2B, 6B, etc.

Drawing Tools

Drawing Board - It is helpful to have a drawing board. Drawing boards have clips and a band to hold the paper pad to it.

A drawing board can be attached to an easel, or it can rest on the lap of the artist or laid flat on a desk. It can be

easily transported, even with the paper pad attached to it.

Graphite Pencils – I use graphite pencils, including 2H to 6B. I suggest Tombow Mono Professional Drawing Pencils. General's also makes some excellent graphite pencils.

Vine Charcoal – For vine charcoal, I suggest purchasing six soft sticks and six medium sticks from Winsor & Newton.

Jumbo Vine Charcoal – As far as brand, I use Nitram Académie Fusains Charcoal for my charcoal jumbo vine charcoal, specifically 25 mm. I suggest getting the extra soft, which is helpful for toning.

Compressed Charcoal – Compressed charcoal is darker than vine charcoal, and it is more difficult to remove with an eraser. Like vine charcoal, it can be used to draw large areas of value or specific, fine details. Both vine and compressed charcoal can be blended. I prefer General's Compressed Charcoal.

Charcoal Pencils – I suggest using charcoal pencils between H and 6B as far as range. As far as brand, General's produces some excellent charcoal pencils.

Conté – Some options include conté sketching pencils, conté crayons, or for more color, conté pastel pencils. Conté crayons are a mixture of clay, graphite, and natural pigments, and were invented in France by Nicolas-Jacques Conté in 1795. The sketching pencils have a wood casing around them, unlike the crayons, which do not.

Blending, Erasing, and Sharpening Tools

Stumps or Tortillons – Tortillons and stumps are used for blending areas of value. For example, it can be used to blend darker and lighter areas of value in a charcoal drawing.

Chamois Cloth – Chamois cloths are used for adjusting value in drawings. They are helpful for wiping out larger or smaller areas of tone or value.

Kneaded Eraser – This kind of eraser can be formed, in order to erase very small areas with a point or a wider area. I prefer General's Kneaded Eraser.

White Vinyl Eraser – This kind of eraser can erase cleanly.

Other Erasers – I also use a simple pencil eraser and an electric eraser. There are a few brands of electric erasers, and any of those available at art stores should work fine.

Sandpaper Block – We can use a pencil sharpener to sharpen pencils, but a sandpaper block is helpful. It is used to keep a point on drawing pencils that are more difficult to sharpen, as well as charcoal, crayons, or pastels.

Spray Fixative – If you want to fix your drawings, I recommend Spectra Fix or Spry Fix.